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10/685,308	10/14/2003	Wolfgang Hauser	Micronas.6968	9841

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EXAMINER	
MITCHELL, JAMES M	

ART UNIT	PAPER NUMBER
2813	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

Office Action Summary	Application No. 10/685,308	Applicant(s) HAUSER ET AL.	
	Examiner James M. Mitchell	Art Unit 2813	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5,7-11,13,17 and 20-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5,7-11,13,17 and 20-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to the request for continued examination filed April 25, 2007.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Totokawa (J.P. 361095536A).

4. Totokawa (e.g. Fig. 1-8) discloses

(cl. 1) a leadframe (6); a platform (2); an electronic member (11) located on the platform and connected to the leadframe by electrical conductors (12); and a housing (20) which encloses the electronic member and the platform, where first and second protrusion/ support regions (2b; Fig. 3) each comprising a projection provided on the platform on corresponding peripheral portions to support the platform during fabrication of the housing, where the housing upper and lower support indentations (e.g. recess taken up by molding, 15; Fig. 7-8) formed therein that expose an upper and lower surfaces respectively of an outer peripheral portion of each lobe (Fig. 8) to thereby allow each lobe to support the platform during fabrication of the housing (Fig. 7) where at least a portion of the first and second support regions project beyond the housing subsequent to the fabrication of the housing (Fig. 9);

(cl. 7, 8) where the leadframe comprises a plurality of connecting pieces (e.g. 2B; Fig. 5) that protrudes from the housing (Fig. 8), where the at least one connecting piece is connected to the electronic member (Col. 6, Lines 5-10).

5. Totokawa does not appear to show that its projections are rounded and therefore pursuant to its plain and ordinary meaning lobes.

6. However, applicant has not disclosed that his dimensions are for a particular unobvious purpose[1], produce an unexpected result, or are otherwise critical. As such, making the shape of protrusion rounded would have been obvious to one of ordinary skill in the art since it has been held that mere dimensional limitations are, prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical. See, for example, In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Totokawa (J.P. 361095536A) in combination with Song et al. (U.S. 6,197,615).

8. Totokawa discloses the elements stated in paragraphs 4-6 of this office action, but fails to disclose notches formed in its lobe.

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[1] In addition to Kurihara that provides support of its island during fabrication, any leadframe, for example, Miyaki et al. (U.S. 2001/0010949) with tabs provides support during fabrication irrespective of the shape of the tab.

9. Song (Fig. 3) utilizes notches formed in its leads/ tabs/Paddle conductive surfaces.

10. It would have been obvious to one of ordinary skill in the art to incorporate notches in the leads including lobes/tabs of Totokawa in order to enhance bonding strength between the encapsulant and conductive material as taught by Song (Col. 3-4, Lines 61-10).

11. Claim 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Totokawa (J.P. 361095536A) in combination with Miyaki et al. (U.S. 2001/0010949).

12. Totokawa discloses the elements stated in paragraphs 4-6 of this office action, but fails to explicitly disclose its leadframe is a metal alloy or that it's coated with an alloy.

13. Miyaki utilizes a leadframe made from a metal alloy (Par. 0056).

14. It would have been obvious to one of ordinary skill in the art to form the fame of Totokawa with a metal alloy in order to provide a leadframe as required by Totokawa (Eng. Abstact).

15. Furthermore, the selected material would have been obvious to one of ordinary skill in the art, since it has been held that the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in Sinclair & Carroll Co. v. Interchemical Corp., 325 U.S. 327, 65 USPQ 297 (1945). See M.P.E.P 2144.07.

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Totokawa (J.P. 361095536A) in combination and further in combination with Kawanabe. (U.S. 5,458,158).

17. Totokawa discloses the elements stated in paragraphs 4-6 of this office action, but does not show an anticorrosive film extends along at least a section of its lobe/supporting section.

18. Kawanabe (Fig. 2, 8) discloses an anticorrosive film (3, 111) that extends along at least as section of its lobe/supporting section (i.e. in contact with support, i.e. 101).

19. It would have been obvious to one of ordinary skill in the art to incorporate an anticorrosive film on the modified lobes of Totokawa, such that it extends along at least a section of lobe/supporting section of Kurihara, in order to prevent rusting as taught Kawanabe (Abstract).

20. Furthermore, see paragraph 15 of this office action.

21. Claims 13, 21 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Totokawa (J.P. 361095536A) in combination with Popovic et al. (U.S. 5,247,202)

22. Totokawa (J.P. 361095536A) discloses the elements stated in paragraphs 4-6 of this office action, but fails to explicitly disclose its chip comprises a Hall Effect sensing device.

23. Popovic utilizes semiconductor hall sensing chips (Col. 2, Lines 57-59).

24. It would have been obvious to one of ordinary skill in the art to combine a hall sensor with the chip of Totokawa (J.P. 361095536A) in order to provide a magnetic field sensor as taught by Popovic (Col. 1, Lines 10-11).

25. Claims 17, 20, 22-25, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Totokawa (J.P. 361095536A) in combination with Popovic et al. (U.S. 5,247,202) and Song et al. (U.S. 6,197,615).

26. Totokawa (J.P. 361095536A) discloses the elements stated in paragraphs 4-6 of this office action and further first and second lobes provided on opposite peripheral ends of the platform (e.g. left portion compared to right portion) along the same axis (e.g. "x" plane), but fails to explicitly disclose its chip comprises a Hall Effect sensing device or notches formed in its lobes.

27. Popovic utilizes semiconductor hall sensing chips (Col. 2, Lines 57-59).

28. It would have been obvious to one of ordinary skill in the art to combine a hall sensor with the chip of Totokawa, in order to provide a magnetic field sensor as taught by Popovic (Col. 1, Lines 10-11).

29. Neither Totokawa nor Popovic disclose notches in lobes.

30. However. Song (Fig. 3) utilizes notches formed in its leads/ tabs/Paddle. conductive surfaces.

31. It would have been obvious to one of ordinary skill in the art to incorporate notches in the modified leadframe package including lobes/tabs of Totokawa in order to

enhance bonding strength between the encapsulant and its conductive material as taught by Song (Col. 3-4, Lines 61-10).

32. Claim 19^{2} is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurihara (U.S. 5,523,1626), Popovic et al. (U.S. 5,247,202) and Song et al. (U.S. 6,197,615) as applied to claim 17 and further in combination with Kawanabe. (U.S. 5,458,158).

33. Neither Totokawa, Popovic or Song appears to show an anticorrosive film extends along at least a section of its lobe/supporting section.

34. However, Kawanabe (Fig. 2, 8) discloses an anticorrosive film (3, 111) that extends along at least as section of its lobe/supporting section (i.e. in contact with support, i.e. 101)

35. It would have been obvious to one of ordinary skill in the art to incorporate an anticorrosive film on the modified lobes of Totokawa, in order to prevent rusting as taught Kawanabe (Abstract). See also paragraph 15, of this office action.

Response to Arguments

36. Other than claim 17 and its dependents, applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

37. With respect to claim 17, applicant's arguments have been fully considered but they are not persuasive. Applicant contends that the prior art does not show depression located between the lobe and platform. Examiner agrees. However, the teaching of the

reference is covering forming dimples all over the leads and platform etc., so it encompasses notches/dimples also being in areas between lobes/tab portions and the platform. Applicant's broad claim does not preclude dimples from being other places. As such, the prior art provides a sound rationale for forming dimples over its platform etc including areas between the lobe and platform, As for applicant's claim that the prior art does not teach about moisture barrier, this is not a process claim. As such, because the product of the claimed invention and the prior art are the same, it similarly will provide the same benefits. Moreover, the fact that applicant has recognized another advantage which would flow naturally from following the dimples/ suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Mitchell whose telephone number is (571) 272-1931. The examiner can normally be reached on M-F 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr. can be reached on (571) 272-1702. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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[2] Claim is drawn to canceled claim 18 and therefore is technically also canceled. However for effeciency, it is presumed that the claim was suppose to be dependent on claim 17 and has been rejected accordingly. Appropriate correction is needed.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ex. Mitchell, J.D.
October 1, 2007

Carl Whitehead
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